Claims

1. A method of diagnosing Alzheimer's disease or an early stage of or a predisposition for this disease by means of a patient sample, the method comprising the steps of:

(a) mitogenic stimulation of the peripherally accessible cells in the sample;

(b) quantification of the mitogenically stimulated cells within the cell population before and after step (a) by means of one or more surface markers expressed after mitogenic stimulation, the cells bearing the surface markers being separated from the cells bearing no surface markers by means of antibodies directed against the surface markers;

(c) determination of the stimulation index as a relationship of the number of cells bearing the surface marker or markers before and after step (a),

a stimulation index which reaches at least 10 times, as a maximum 100 times, the unstimulated control sample, being a sign of an Alzheimer's disease or an early stage of or a predisposition for this disease.

2. The method according to claim 1, wherein the sample is a blood sample and the cells are lymphocytes.

3. The method according to claim 1 or 2, wherein the surface marker is CD69.

4. The method according to claim 3, wherein the $CD69^+$ cells are further specified with respect to $CD4^+$ and/or $CD8^+$ subpopulations.

5. The method according to any of claims 1 to 4, wherein the blood is stabilized by one or more anticoagulative compounds before step (a).

6. The method according to any of claims 1 to 5, wherein the cells are stimulated by PHA, protein A or PWM.

7. The method according to claim 1, wherein the antibodies in step (b) are bound to magnetic particles and the separation is carried out via immunomagnetic separation.

8. The method according to any of claims 1 to 7, wherein the stimulation index is determined by determining the protein content and/or nucleic acid content of the cells bearing surface markers before and after step (a).

9. A kit for the diagnosis of Alzheimer's disease or an early stage of or a predisposition for this disease, the kit containing the following constituents:

(a) a compound for mitogenic stimulation; and

(b) at least one antibody directed against a surface marker expressed after mitogenic stimulation.

10. The kit according to claim 9, also containing:

(c) an anticoagulative compound; and/or

(d) a buffer for cell lysis.

11. The kit according to claim 9 or 10, wherein the antibody is an antibody bound to a magnetic particle.

12. The kit according to any of claims 9 to 11, wherein the antibody is an anti-CD69 antibody.

13. The kit according to any of claims 9 to 12, which also contains an anti-CD4 and/or anti-CD8 antibody.